R O R S C H A C H R E S E A R C H E X C H A N G E

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RORSCHACH REACTIONS IN EARLY CHILDHOOD

PART ONE

by

Bruno Klopfer, Ph.D. and Helen Margulies, M.A.
with contributions by
Lois B. Murphy, Ph.D. and L. J. Stone, Ph.D.

I Introductory remarks

II The material

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I Introductory Remarks

Rorschach reactions in early childhood command a special interest from the practical as well as from the theoretical point of view. An early recognition of personality difficulties is obviously of great practical importance. It is unusually difficult to differentiate between mere environmental disturbances and the beginning of personality deformations if one has to rely on the observation of the behavior of younger children. There are sometimes great discrepancies between the "seriousness" of the behavior and the "seriousness" of the disturbance. Some discrepancies may depend on merely incidental factors as early discipline. The difficulties encountered in the application of intelligence tests in early childhood are practically even more important. The interdependence of emotional and intellectual growth factors is so decisive in this early stage of development that any intellectual diagnosis which cannot take into account this interdependence is bound to be very unreliable. It is obvious how important around the beginning of the school career of children, such a diagnostic differentiation is.

Theoretically the early stages of personality development are not less interesting than practically. If it would be possible to observe "personality in the making" in these early stages we are bound to gain in our insight into the structure of personality. A serious question arises at this point; can we distinguish at the early stages of development anything like an individual personality? Preliminary experiments helped to give reassurance on this particular point. Rorschach records of sixteen children between two and five years of age were submitted to various Rorschach experts for blind interpretation. The personality descriptions based on this Rorschach material were then given to various psychologists thoroughly familiar with these children. In one case all children without exception were identified. In another case two children were interchanged. These results gave sufficient reassurance that the Rorschach reaction of pre-school children reveal something which can be called an individual personality picture.

Another surprising result of these preliminary experiments was the fact that basically the same interpretative principles could be applied to Rorschach reactions in early childhood as had been worked out for adults. There are naturally great technical difficulties in ascertaining the way young children arrive at their responses to the Rorschach cards. But taking these difficulties for granted the interpretive significance of the various formal categories in these concept formations seem to be basically the same as in the corresponding categories of adults. Furthermore, some of the reaction patterns found in adults in pathological cases only are produced by young children normally, and to such an extent that we gain new insights into the dynamics which produce such patterns. Even reactions like contamination, considered pathognomonic for schizophrenia, seem to belong to the normal repertoire of gifted pre-school children. In passing, we will mention that this opens possibilities to study the phenomenon of regression.

II The Material

As material we had at our disposal 205 records of 155 children between two and seven years of age. These records were collected by various Rorschach workers in various institutions. The nursery school of Sarah Lawrence College contributed 39 records collected by Dr. L. J. Stone; the nursery school of Vassar College, 47 records collected by Dr. L. J. Stone and

Marion Cowin; the nursery school of Wheaton College 52 records collected by Julia Jacoby; the Visitation Academy in Baltimore 22 records collected by Helen Margulies in connection with a study directed by Dr. Reichenberg the nursery school at Temple University contributed 15 records collected by Dr. Helene Hertz; the Shady Hill Growth Study at Harvard University contributed 15 records collected by Mrs. Stanley Cobb; and 15 other records were obtained from various other sources.

The age distribution within these groups of records is shown in the following tabulation:

Age	2-2.11	3-3.11	4-4.11	5-5.11	6-6.11	Total No. of records
Wheaton	--	7	15	19	11	52
Vassar	10	13	23	1	--	47
Sarah Lawrence	4	17	18	--	--	39
Visitation Academy	--	1	1	13	7	22
Temple Univ.	2	7	6	.	--	15
Harvard	--	--	--	10	5	15
Miscellaneous	1	1	4	9	--	15
Total	17	46	67	52	23	205

The statistical significance of this material is naturally limited. There are according to our knowledge no great difference in the socio-economic background of the institutions which contributed the records. However, no attempt has been made to equate the children in the various age groups on the basis of their socio-economic background.

Regarding the intellectual level of the children, the available data show that only a small minority of all the subjects range between .80 and 1.00 I.Q. while the vast majority, probably 80 to 90% of all subjects, have I.Q's. on a higher average to superior level. The numbers of records are much too small within each age range to attempt any equation on the I.Q. level. This limits the significance of our findings in two ways. We do not know whether a group of predominantly dull or merely average children would show similar characteristics, and we also cannot be sure how far our findings may be determined by the mental age rather than the chronological age of the children. These problems have to be solved by future research.

Taking all these limitations for granted, our material still lends itself quite readily to the forming of preliminary hypotheses. Furthermore, the trends visible in the general figures showing changes from one age level to the next are confirmed by longitudinal studies, as we shall see.

III Administrative difficulties with the earliest Rorschach reactions.

Our material contains records of children between two and three years of age. Occasionally we have seen records of children less than two years old. The exact developmental age at which the first Rorschach reactions can be observed has not yet been established. Obvious pre-requisites are a minimum of language development and cooperation. Some of the very early Rorschachs are given in the one-word sentence style. However, the same children who used only one word to express their total reaction to one of the Rorschach cards were able to use more elaborate language outside of the Rorschach situation. How far a child has to develop his capacity for verbal expression beyond the general one-word-sentence in order to react to the Rorschach cards would be worthwhile studying more closely.

The pre-requisite of cooperation on the part of the child implies first that the child must be able to focus his attention long enough on the cards to react to them; secondly, that he must be willing to communicate to the examiner his reactions in some recognizable form. Sometimes children look very intently at the cards without saying a word, and communicate hours later to a person more familiar to them than the examiner all their discoveries.

In many cases the persistence of "baby talk" makes it very difficult for the Rorschach examiner not familiar with the child to understand what the child is talking about. In such cases it is advisable to use the mother or the nursery school teacher as an intermediary or interpreter. There are many other technical variations in the administration of the test, which are quite self-evident to an observant examiner. However, it is surprising to what extent the method can be applied in the routine fashion with very young children. Naturally children get even more easily annoyed by a tactless inquiry than adults do. The need to be concrete and matter of fact in inquiry questions and to avoid any challenging or critical questions or tone of voice becomes easily self-evident in working with young children. It could almost be said that occasional work with pre-school children can contribute much to a refining of the skill of a Rorschach examiner if he is familiar with the basic principles of administration. Young children bring into sharper profile all the finer nuances in administration which are less obvious but not less important in working with adults.

It happened surprisingly rarely that children were unable to identify their responses after going through the performance proper. We thought originally that young children would have to be pinned down at least after each card if one wanted to get information at all. However, actual experience shows that young children know almost as often and just as well what they had in mind as adults do. Whenever children changed their responses in the inquiry very arbitrarily as a rule these responses showed such an utter disregard for the given form of the blot that it actually did not make any difference whether one called it "a mouse" or "a cat", "a bee" or "a doggie". Naturally such "a-logical" or "pre-logical" behavior plays quite a role in the explanations of the earliest Rorschach reactions and make an exacting inquiry not only difficult but often superfluous.

The most decisive difference in administration seems to be that the examiner depends much more on the "spirit of the moment" which frequently has to be specially produced by motivating techniques. One may get a Rorschach

record not only one day and not the next, but even one hour and not the next. At the earliest stage it is always advisable to try to get a few Rorschach records of each child. Since the performance proper hardly ever outlasts ten minutes this demand does not imply any hardships for the examiner. The spacing of these retests depends entirely on the individual situation. The main concern is that the child should not get annoyed with the cards.

IV Successive patterns of early Rorschach reaction.

A. The most undifferentiated reaction to the ten Rorschach cards can be described as "magic repetition". With utter disregard for the difference between the ten cards the child simply repeats the same word as his reaction to each card. It does not make much difference whether the perseverated word is "picture", "picture", "picture"..... or "doggie", "doggie", "doggie" .....

The word chosen may or may not be determined by some vaguely perceived features of the first card as in the case of the perseveration of "mountains" or "smoke" or "airplane". The "magic repetition" of this same word to the presentation of each successive card indicates clearly that the instruction is interpreted by the child on this "pre-logical" level to resolve each situation by touching it with a "magic key" which has been more or less accidentally encountered in the first situation. As we will see in the tabulation at the end of this section, this reaction became quite rare after three years of age and disappeared completely in our sample of children when the fourth year was reached. Considering the skewed sample of our subjects the age limits may be slightly higher in terms of mental age.

B. This very early reaction pattern can be modified in different ways.

1. The "magic repetition" can be substituted by a rejection of all the cards which the child does not find particularly interesting or attractive either by silence or by a statement like "I don't know" or "you tell me".

Rejection of individual cards naturally can be found in all age groups including adults. We consider the rejection only as a typical reaction pattern for young children when more than three cards were rejected in one record. Interestingly enough there was only one record in the whole collection where the cards not rejected still showed the pattern of "magic repetition" and in this one case the perseverated reaction consisted of color naming, quite a "sophisticated" form of such a primitive reaction, since the content of the perseverated reaction pattern is related to some objective characteristic of the cards. In the other ten cases of our sample the responses given to the non-rejected cards showed at least some consideration for their particular characteristics.

An example of this type of reaction is the following record by a girl at two years, ten months. I. I don't know. II. I don't know. III. A horse. IV. A top. V. I don't know. VI. I don't know. VII. I don't know. VIII. I don't know. IX. I don't know. X. (walks away).

2. Another modification of "magic repetition" is to limit the perseveration of one concept to some of the cards and give more individual

attention to the others. A certain tendency to perseverate, that means to use a solution found in one card rather unconcernedly for a few of the others, persists throughout early childhood. We counted records as this type of early reaction pattern if the perseveration included at least four different cards, provided the card is used as a whole. Applying the same concept like "butterfly" or "fish" to different portions in different cards, when it approximately fits to the given shape, constitutes the next pattern (C).

A good example for pattern B-2 is the following record given by a girl at 2 years,9 months: I. Doggie. II. Doggie too. III. That could be a doggie too. IV. That could be a dog too. V. Seems like a house. VI. Seems like a fire. VII. That could be a doggie. VIII. That seems like a tumble. IX. A doggie. X. That could be a mouse.

These first modifications in reaction pattern are very frequent between two and four years of age. They seem to peter out between four and five and have very rarely been found in our sample after five years of age.

C. A third and decisive step has been made when the majority of all cards, at least 7 out of the 10, receive sufficient individual attention to merit a variety of responses. These responses may be very crude, may only have the faintest resemblance with the outline of the blot or on the basis of confabulation may assign to the whole blot arbitrarily a meaning suggested by some minor detail only. Still the progress over the two major stages described before seems to be quite significant. None of the children in our sample reached this stage before the third birthday. Should a child be able to respond in such a way when it is less than three years old it can be safely assumed that it must be an unusually gifted and prematurely developed child. On the other hand, a child of 5 years or more who has not made this step can definitely be considered as infantile, disturbed or retarded, as compared with our sample.

A minor modification within this step is the survival of the perseverating tendency within the last three cards where the color seems to create a similiar situation calling for the "magic key solution" as the whole Rorschach situation presents at an earlier age.

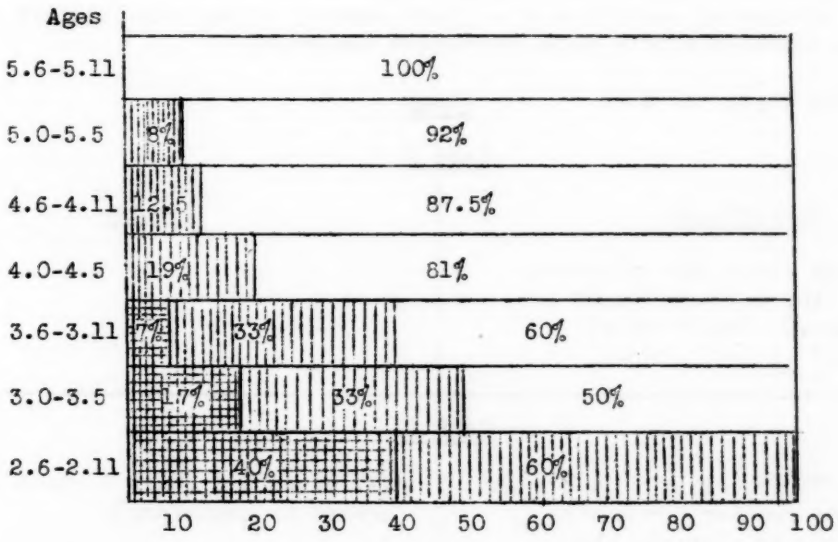
An example for this type of reaction presents the record of a girl at three years, five months. I. A bird. II. A monkey. III. A monkey too. IV. That's gotta be a table. V. This is going to be Hallowe'en. VI. A Christmas tree with some lights. VII. A pineapple tree. VIII. That's gotta be a bathtub. IX. A bathtub too. X. This is gonna be a bathtub too.

The very important modifications in regard to the quality of the responses, their form accuracy level, the use of various determinants, and the degree of organization necessitate considerations which go beyond these early reaction patterns.- They will be considered in other parts of this study.

Percent Distribution of Reaction Patterns A,B and C

Ages	Number of records	Pattern A No.	Pattern A %	Pattern B No.	Pattern B %	Pattern C No.	Pattern C %
5.6-5.11	12	-	-	-	-	12	100
5.0-5.5	12	-	-	1	8	11	92
4.6-4.11	16	-	-	2	12.5	14	87.5
4.0-4.5	16	-	-	3	19	13	81
3.6-3.11	15	1	7	5	33	9	60
3.0-3.5	12	2	17	4	33	6	50
2.6-2.11	10	4	40	6	60	-	-

Percent Distribution of Reaction Patterns A,B and C



The bars represent the percent distribution of reaction patterns A,B, and C in each age group. The reaction patterns are indicated by the following:

V Longitudinal Rorschach Studies.

The almost unlimited possibilities for retesting enables us to use the Rorschach extensively for longitudinal studies. Between two and four years of age it seems worthwhile to collect a new record every two or three months, later on every half year. There is hardly any other means of getting a more plastic impression of mental and emotional growth in an objective form than in such longitudinal Rorschach studies.

In order to demonstrate this fact we would have to present individual case studies giving not only the complete Rorschach material but also the case history and other psychological evidence. This has to be done more extensively at another place because it would overburden this preliminary report. The following four records collected by L. J. Stone, Ph.D., of a slightly retarded little boy between the ages of 2 yrs. 11 mos. and 4 years reflect more clearly the early patterns of Rorschach reactions described in the preceding section. The three records collected by L. J. Stone, Ph.D., of a girl of approximately the same initial age (2 yrs. 9 mos. to 3 yrs. 9 mos.) give a growth picture of a well developed and adjusted child. In this case we are fortunate to have at our disposal a short summary of her case history which we publish together with a blind Rorschach analysis.

Case I - Age 2 yrs. 11 Mos. Jimmy

Card I

Performance	Inquiry
(A. tell me about this picture.) (A. grabs the picture, turns it over, smiles.) What's that? What's that? I don't know.	

CARD II.

What's that? (Pointing to the right black). (He reaches for a vise, walks over to get between the window and the vise and becomes completely absorbed in it for some time.)	(A. moves his chair forward - no answer to questions).

CARD III

(Made no response to "What's this", etc., continued to occupy himself with the vise). (What's this?) Doggie. (A. busy with the vise. Still absorbed).	(Where is the doggie?) No doggie there. (What is there?) Broken. (where?) (A. points to the usual man's waist where there is an actual break.)

Performance	CARD IV	Inquiry
(A. takes the card at Examiner's suggestion and holds card up to each of adult's face. He goes to the corner and takes the broomstick).		
	CARD V	
Nice. Dese(He puts the card down).		
	CARD VI	
Those are nice (feeling the card along the middle and side).		
	CARD VII	
Nice. (He throws the card on the table.)		
	CARD VIII	
Over there (referring to where he puts the card on the table).		
	CARD IX	
What's that? Over there. (Putting the card down gently.)		
	CARD X	
Nice. (Shows it to one of adults present. 's'all (He goes with a gesture of completion). Note: (A. was on his feet most of the time and was only interested in the cards fleetingly. His responses to them even to the extent that the record showed was partly on the basis of the social pressure rather than to the cards as stimuli).		

Scoring

Since all cards are rejected except for the "doggie" in III no scoring is possible for this record.

Age 3 yrs. 6 mos. Total time-under 10'.

Performance	Inquiry
	CARD I
Table.	Foot. (top) Pit?
	CARD II
Mousie(?)	Light.
	CARD III
Horsies.	Horses
	CARD IV
Light.	Pants (?)
	CARD V
Red Light	Hair (?)
	CARD VI
Flower.	(First upside down then right side up) Flower
	CARD VII
Green Light	Water
	CARD VIII
1. Blue (?) Light 2. Red light. 3. Blue light.	Pig? Pete?
	CARD IX
Brown.	Plates?
	CARD X
Green	Plates?

Note: At card V A. lost most of his interest and kept wandering around the room, switching lights on and off, etc. Examiner bringing him back, holding him on lap etc. When he did talk it was difficult to understand since his level of speech development is slow.)

Scoring

Except for color naming in Card VIII, IX and X the concept formation in the rest of the record is not ascertainable.

Age 3 yrs. 11 mos. Time 7 minutes.

	CARD I
(What is it?) Make it cow. (i.e. it is a cow).	
	CARD II
's'at? (what?). Scratch. (Who scratches?) This one. (Right black figure) (What is that one?) Scratch.	(Was not clear whether he meant activity or was responding to the color.. aware of bloody scratches, mercurochrome, etc.)

Performance		Inquiry
CARD III		
Scratch; another scratch. (What is a scratch?) Monkey scratch..monkey. (Points out usual figure of men) (Ever see?) Yes, right here. (Pointing to figure again.)		
CARD IV		
Λvʌ Light. (Looking at Examiner with tentative smile). (Lights?) Tree light. (Christmas tree?)		(Not sure whether he meant this as a response, or whether he was reverting to this standard verbal device of his.)
CARD V		
Scratch. Unscratch (another scratch?).		
CARD VI		
A fencer. (Indicating center line, probably means pencil.) (Examiner: Fence??!) Yeah.		
CARD VII		
's'at? 1. Doggie. (whole blot)		
CARD VIII		
Standing up. (left "animal" figure) (Examiner: What?) Boy standing up. Minking. (Mickey?- this was not meant as a nonsense sound; he thought he was saying something.)		
CARD IX		
Eggs. (Examiner: what kind?) Eat. (Examiner: boiled or fried?) Fried. (Examiner: fried or boiled?) Boiled. I don't like eggs.		
CARD X		
What? (several times, smiling as usual) Bost. (He then made some remarks about "water, gasoline; gasoline car" but it was impossible to attach them to the card definitely. He refused to go on longer.)		

Note: He had been trying quite hard, although poverty of language made it hard for him to get things across. Slight, shy smile throughout. Far more cooperation than in previous record.

Scoring

Scoring as before not possible in this record.

Age 4 yrs. 0 mos. Time 7 minutes

CARD I

Performance	Inquiry
Whasaat? What? (E. you tell me). What? (What?) (Looking coyly at E. with lower lip drawn in pointint to card as he repeats, "whasaat?"). Cow (Goes quickly to next card).	

CARD II

(Points to it, touches, taps; first white, then left black, then bottom red. Bunny. (quickly to next card)	(Especially in the first few cards, would look at them coyly, then turn them around so that E. could see. Started off by pointing to or touching some definite part of the card.)

CARD III

Monkey. (Quickly to next card).

CARD IV

(Is that a cow?) Yes.

CARD V

Whasaat? (What?) Book cow. (What? Tell me. What is that?). Big cow. (Touching lower projections) Whasaat? (Looks up as he hears clock chimes). (What's this? drawing A's attention back to card). Thass a big monkey.

CARD VI

Whasaat? (What?) What? (You tell me) Foo...(?) (Touching tip, almost dipping finger into the top projection, then running finger down middle of card). (What? what did you say?) What is that? (Tell me again). (He touches and rubs card) Cake (running fingers up and down card). Eat cake.

CARD VII

Smoke (lower left portion)

CARD VIII

Bank smoke. (Running hand up and down middle, up and down section just to left of middle, then up and down usual 'animal' at side). (what? tell me again). (A. looks very coy, half-smiling, half-shy as E. questions him.) Tell you again? (Yes, what is that?) Can't scratch it? (Can't scratch it?) Scratch a car..	(on the way up to the playground A. had said: "My daddy comes for me".)

CARD VIII Cont'd.

Performance	Inquiry
daddy's car. (Is this daddy's car?) No..my father's car. (You scratched his car?) Mmmm. (Whats this? trying to return him to the card). Monkey. (where?) (Indicates usual 'animal' at side).	

CARD IX

Light (Puts finger fight down middle from top of rod-like portion through middle of pink, twice consistently.)	

CARD X

Smoke (where?) On the train. (See the train here?) Yes..(where?) Train all gone. That's a train..that isn't a train. (running finger across middle of the card). (What's all this?) Pussy cat. (Where? A. indicates blue). (What's this?- blue on other side) Pussy cat too.	

CASE II. - Age 2 yrs. 9 mos. CANDICE

Performance

(Note: throughout the session C. was rather active trying to take successive cards herself and pushing the "used cards" around the table. Her speech was extremely indistinct and the record suffers from that.)

Card I. Doggie. Anuder one.

Card II. Doggie too. (She pushes the card away).

Card III. Dat could be a doggie too. This is a donkey. (Her finger is resting on the usual human head and she has turned the picture slightly to the right.) Anuder one.

Card IV. That could be a dog too.

Card V. Seems like a house.

Card VI. Seems like a fire.

Card VII. That could be a doggie.

Card VIII. That seems like a tumble. (E. could not make anything else out of what she said, nor explain what it was but when asked what a tumble was she pointed to the picture and when the pressure became too great she tucked her chin into her chest and smiled.)

Card IX. A doggie. That could be a doggie too.

Case II - Cont'd.

Card X. That could be a mouse. (Put your finger on it.) (She indicated the red.) (Show me the head.)(She indicates the top part of the red.) (Show me the tail.) (She indicates the bottom of the red.) (Show me the legs.) (She indicates the side tan, having first indicated the orange and changing her mind. She said something utterly incomprehensible about the top gray.) This is funny (The top gray.)

(Which do you like best?) (She indicates VIII) (E. felt that she had picked the first one that struck her eye and continued to spread them out). (Which is nicest?) These (Pointing to one after the other). All of them. (She starts putting them away in spite of E's efforts to keep them out. She says, "I saw that one" and continues to put them away.) (She says, radiantly) "I had a nice time!"

Age 3 yrs. 4 mos.

Performance		Inquiry
A tree (smiles)	Card I	A tree. (Does it have branches?) yes. (leaves?)Yes. (See those?)(Dots at the edge).
Dogs.	CARD II	Dog fighting. (what's this?) Eyes.
Ponies.	CARD III	Christmas tree. (Indicates the usual arms and feet for feet and tails of the ponies).
Oh!-- a--a--(frowns) a wolf.	CARD IV	(Is that a wolf?) Yes. (How can you tell?) Here's his front (top) Here's his back (Middle) See the wolf?.. Oooohe's coming out (bottom of card)
A mouse! (brightly)	CARD V	(Can you show me the mouse?) Here's his head (top, middle). Two ears. And here's his feet (bottom middle) And tails. Front tail- (and a back tail?) Yes.
A bee.	CARD VI	Christmas tree. No. A bee! See that part sticking out? Put it away so he won't bite us! (Wings?) (Indicates on each side). (What else?) Whiskers.
A pig.	CARD VII	(A pig?) Yes. (Tell me, etc.) The whole thing is a pig. Here's his head (top pt. of bottom third). Here's his tail. (Middle side pro-

CARD VII Cont'd.

jection.) (What's this?- top). That's feet. Two tails he has. (Is that part of the pig? -white) No that's part of his food.

CARD VIII

A Christmas tree. (She is all smiles.)

A bird cage. (Where's the bird?) (Indicates pink on each side.) Thats a bear. Going up over here to-- Two bears.

CARD IX

A bird cage. (Is there a bird there?) See those birds? (Pink)

Oh, a bird bath. (Puts it aside.)

CARD X

That's a- a bird bath.

Oh, that's a bird bath too. No its a Christmas tree. All pretty things on it. (What?) Pretty things for you and I. (What kind of things?) There is happy Christmas presents. This is a bell. (Middle yellow-triangular figure) (What's this-lower green?) A rabbit. (What else?) All toys.

Age 3 yrs. 9 mos.

CARD I

A donkey.

(What was this? Remember?) A cloth. (I thought you said a donkey). Oh yes, a donkey. (Can you see the feet?) (She indicates the bottom of the card.) (Ears?) (Side upper projections.) (What's this?- usual wing- side projections.) That's the mother- no, the father donkey. (This undoubtedly not seen. She was too restless to stay for more).

Card II. A rooster.

Card III. A-mmmmm m- pussies.

Card IV. A frog.

Card V. A cloff. (For what?) To wipe things up with.

Card VI. A fly.

Card VII. A nanny goat.

Card VIII. A tree.

Case II - Cont'd.

Card IX. A-a- a big bad wolf! (Humorous? Really seen?) Look at me! My leg! (Paint on it).

Card X. That looks like a Christmas tree.

Scoring

Case II. Candice

	2 yrs. 9 mos.			3 yrs. 4 mos.			3 yrs. 9 mos.		
Card I.	W	F?	A	W	F-	Pl	W	F-	A
II.	D?	F	A	W	FM	A	D?	F?	A
III.	W	F (FM?)	A	W	F (FM?)	A	W	F (FM?)	A
IV.	W	F	A	W	FM	A	W	FM	A
V.	W	F-	Arch.	DW	FM	A	W	F? (c?)	obj.
VI.	W	K?	fire	DW	FM	A	W	FM	A
VII.	W	F-	A	DW	FM	A	DW	F-	A
VIII.	W?	?	tumble?	W D	FC? FM	(pl) A	W	F	pl
IX.	W	F-	A	WS	F-	obj.	??		
X.	DW	F-	A	WS	F-	obj.	W	FC?	(pl)

BLIND RORSCHACH ANALYSIS

OUSTANDING RORSCHACH FEATURES

Outstanding in her records is mainly that there are practically no extreme features. She reacts in almost every respect as we expect in a Rorschach record of a child between 3 and 5; W mainly in the form of confabulations; D possible but not emphasized; A %, - 50% or more; typical concepts such as: trees, dogs, and a number of other animal names without particular emphasis on their shape, sometimes replaced by perseveration (playing either with one concept or several names) FM almost to the exclusion of M and m.

The only point where she seems to be less typical is that she does not react readily to the color; besides, she has a few original ideas such as: "bird cage" and "bird bath".

MENTAL DEVELOPMENT

There are no indications that she could function on a mental age

level above 5. Her IQ at this moment was 131, her C A 3-9. However, she is quite decisive about her responses, and some of them are more accurate than in many other children.

EMOTIONAL DEVELOPMENT

As mentioned above, she doesn't respond very readily to emotional stimuli (color). However, the relatively great number of FM shows that she has no lack of childlike directness. The percentage of F is rather high, but not high enough to indicate actual constriction. She exhibits prob. just as much spontaneity and creativeness as we expect of a child of her age, but everything is well under control.

A normal little girl.

Summary of Candice in Nursery School

Candice is a charming, natural little girl whom all comers found "unusually normal" through her three years of nursery school. She was friendly to both adults and children and at home with all types of materials. Her instant and infallible response to the rhythms and mood of music was particularly characteristic. She seemed to know just what each child needed, and made contact with different children in a wide range of ways; she seemed to "know how to get along with them". Her intelligence quotient of 140 during her second year - Age of 3 - placed her in the group of "very superior" children, but her grasp of new situations and easy adaptability during her first year went beyond that of other superior children. She never showed any resistance to routines her first year.

Hints of possible strain later came in these early notes: "she is more concerned about getting paint on her hands" than actually painting. "has a strained, flat tone of voice" which may point to constraint in feelings, for all of her free activity. "Apparently has no social inhibitions or active likes or dislikes. Almost avoids too personal contacts" suggests also a lack of the emotional freedom which might have involved her more deeply.

She was one of the few two-year olds who could not play freely with "messing materials" like dough, until she had seen what other people did with it; and she did not use finger-paints for the elementary delights of texture, color and rhythmic line, but for the representation of an idea. Both of these responses suggested more sensitivity to patterns and forms than most two-year olds exhibited, and indicated that she was most comfortable where patters were provided, and least free where direct emotional response from herself was called for.

Toward the end of her first year she began to be experimentally aggressive with children in a mild way.

In her second year her teacher again commented on her "gift for friendliness". At the same time, her teacher noted "a more intense quality" emerging, with more personal relationships, giving a deeper level of herself, and needing the same deep level response. More definite negative feelings such as screams and blows appear in this context. At the same time, shifts in expressive patterns appear; the strained flat tone of voice is less in evidence - there is more modulation in her voice; in painting, "each stroke

seems symbolic to her of fantasy, expressed in a stream of conversation as she works." Later in the year the notes record "boisterous play", furious, flushed, scowling retaliation to the attacks of another child; and fantasy outlets for hostility." It is important to note here that she was in a group which included 2 or 3 unusually aggressive boys, so this development in aggression might also be seen as another illustration of her capacity to take on the ways of the group.

In the fall of the third year, against the same background of charm, activity, and social responsiveness and competent social organization, there were at least two periods when she seemed "to crumple and be unable to manage situations which are usually easily mastered by her." On these occasions she wept very easily, she became worried and helpless looking, her competence in handling people and situations vanished completely.

In the spring, the same combination of excellent social skills with periods of woe, disappointment and resistance to adults was reported. She seemed tense, and for the first time developed vomiting spells.

She continued to be fertile in ideas for play, but some of her earlier areas of spontaneity had evaporated: "she has lost her spontaneity in music. She's automatically good in singing, she automatically recognizes songs, but sings without gusto. She likes to preserve the <u>form</u> of singing period. Her freedom in rhythmic movement has a slightly brittle edge now, her responses seem more intellectual, she isn't abandoned as she used to be." This appears to be another illustration of her capacity to take on color from a group situation, or from patterns that are given, since at present in a music period with one other spontaneous girl she is very responsive and released.

In play with Miniature Life Toys she set up an arrangement with two dolls, a "good girl" and a "bad girl". During this last period, her intelligence score declined to 131, perhaps another indication of some loss of security. Part of the changes, at least, may be referred to the change at home where her mother was ill for many months during pregnancy. Here again, when home relationships were strained and anxious, Candice mirrored the feelings to which she was exposed, even to the nausea.

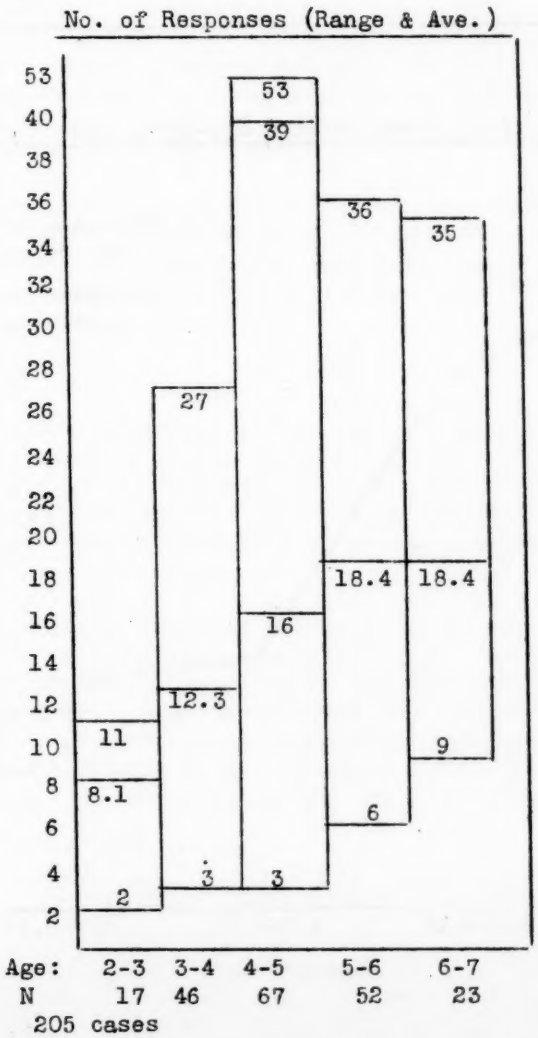
When Candice was seen this fall, she seemed secure and happy. She is now in kindergarten. When she visited us, there was little evidence of the bursts of aggression which she showed at four. She uses socially acceptable and effective techniques for competing with her baby brother for attention, and is delighted with him. It is of interest that her current intelligence test rating is 143, back at the high level of the year before last.

(by Lois Barclay Murphy)

VI. Quantitative Results

The remarks made in section II regarding the limited statistical significance of our findings applies naturally especially in this section. The quantitative results we chose for presentation here only serve the purpose of making certain trends visible which may be investigated later under more exacting conditions. At least other research workers may learn from these preliminary results what to look for in their own studies.

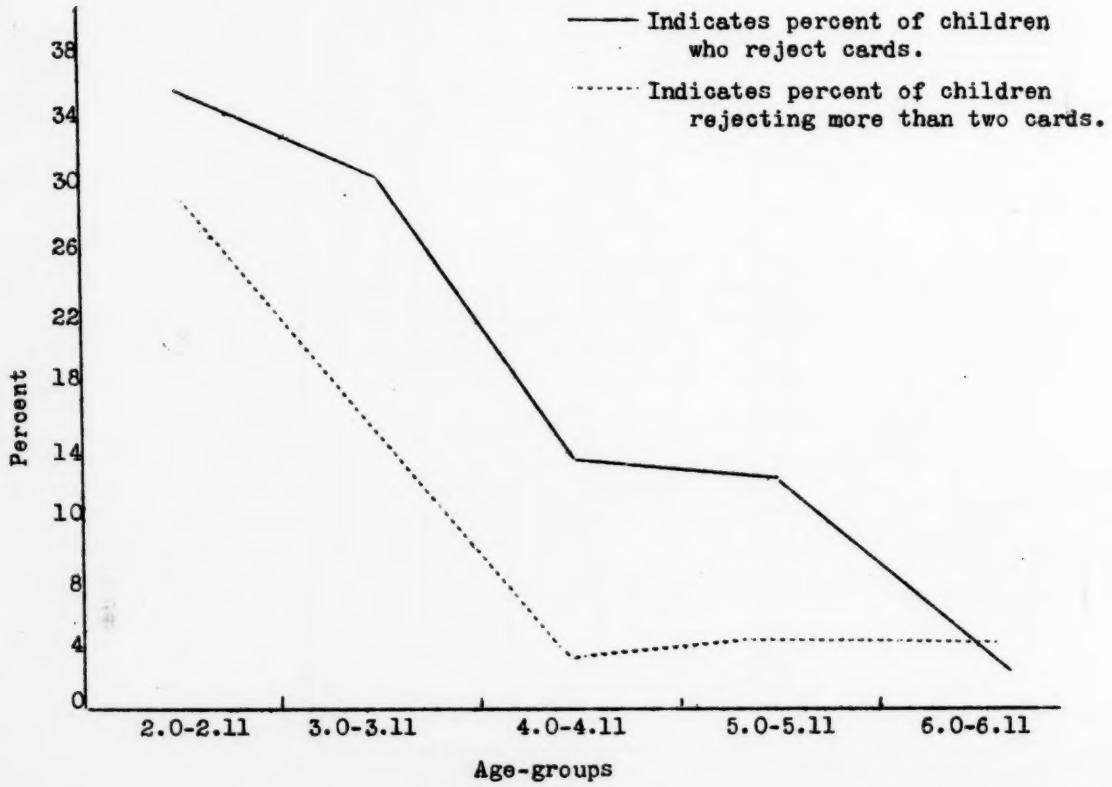
A. Number of Responses and Rejections



Percent of Children in each Age-group Rejecting Cards

Ages	2-2.11		3-3.11		4-4.11		5-5.11		6-6.11	
N	17		46		67		52		23	
	No.	%	No.	%	No.	%	No.	%	No.	%
No. of children rejecting cards	6	35	14	30	9	13	6	12	1	4
No. of children rejecting two or more cards	5	29	6	13	2	3	2	4	1	4

Percent of Children in Each Age-group Rejecting Cards



Discussion of Graphs

The rise in the average number of responses and especially in the lower range limit seems to be closely related to the fall in rejections. At the youngest age group (2-3) over one third of the children in this group reject cards and all of these except one reject more cards than we usually grant an adult (more than 2 cards). In the next age group (3-4) the proportion of rejecting children sinks only slightly, to 30% (14 out of 46) and there are several culprits left to reject more than two cards. In the next two groups the percentage is considerably lower (13% and 12%) and both times only two children reject more than two cards. In the last group (6-7), used here only for comparison, there is only one out of 23 children who rejects three cards.

The variations in the upper range limit of the number of responses in each age group are irregular. After a steep rise in the first three age groups the upper age limit settles down in the neighborhood of the figure which is usually assumed to represent the most frequent range for adults (between 20 and 40). An important effect of this different behavior of the upper and lower range limit is a shrinking of the range from four years on till it reaches in the last age group a range which could be considered normal for average adults as well, the average number of responses however remains still below the one expected for average adults.

The slightly higher average figure for the last two age groups as compared with the figures mentioned in Alma Paulsen's paper (15 there, 18.4 here) can probably be explained by the fact that the distribution of I.Q.'s in Miss Paulsen's subjects followed the normal curve while our subjects were predominantly on the above average side.

B. Mental Approach

In discussing quantitative results for other Rorschach categories, except the interpretatively little significant total number of responses, we encounter a new difficulty. The interpretive meaning of these other figures depends to a much larger extent on qualitative factors which can be ascertained quite objectively but are not revealed in the mere number of responses or of children using any specific category.

Taking these difficulties for granted, we can still find a few rather significant figures in comparing our age groups. Looking back at our description of the first patterns of reaction we can understand that quite a few among the very young children do not bother about any special portions of the card, assigning their more or less "magic" meaning roughly to the whole card. Correspondingly we should find a steady decrease in the percentage of children who use only W's even if we disregard for the time being the quality of these W's.

Percentage of Children Using Only W

Age		
	2-2.11	35%
	3-3.11	23%
	4-4.11	10%
	5-5.11	3%
	6-6.11	0

The number of children giving enough attention to the cards to select detail areas for their responses increases correspondingly. In all but two cases these children used the most obvious detail areas (D) exclusively or predominantly. There was only one child in the complete sample, a girl of 3 yrs. 8 mos. who did not use the W approach at all. She rejected 8 out of the 10 cards and gave one D to each of the remaining two.

C. Distribution of Determinants

Average Number of Major Determinants for Each Age-group

Ages	M	FM	m	Total F	FC	CF	C
2-2.11	.06	.18	.23	3.46	.29	.23	.59
3-3.11	.35	1.26	.22	5.43	.87	.41	1.04
4-4.11	.67	1.78	.15	6.56	.88	1.24	.54
5-5.11	1.11	2.09	.23	8.88	1.29	1.44	.75
6-6.11	.95	3.0	-	8.91	2.08	.78	.69

Discussion of determinant graphs (See page 22)

As one safeguard against possible distortion of the statistical picture due to inadequacies of the sample we will use the proportion of children using the major determinants in each age-group.

Percentage of Children Using Determinant

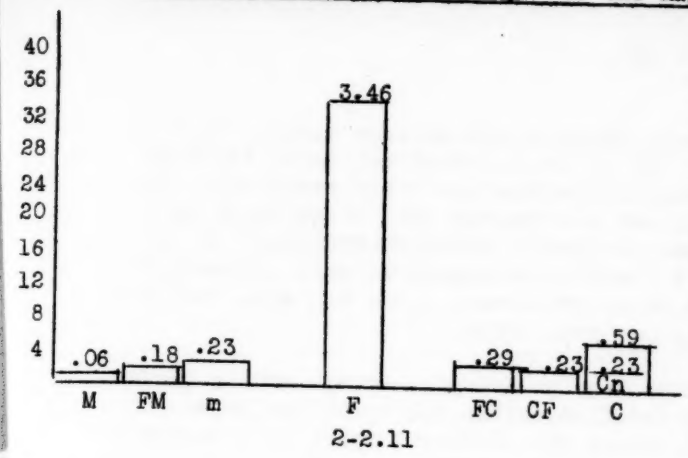
Age Range	M	FM	m	FC	CF	C
2-2.11	6	18	18	12	12	29
3-3.11	30	48	2	37	24	46
4-4.11	34	64	9	27	45	30
5-5.11	54	67	13	54	67	41
6-6.11	65	78	9	65	43	30

Beginning with M we can observe an even more consistent rise in the proportion of children using this determinant than in the average number of M's in each age group. Our findings substantiate Alma Paulsen's findings about the presence of M in young children. However, the average per child never reaches one M and it is most likely that M's are to be found almost exclusively in superior children below the 8 year level.

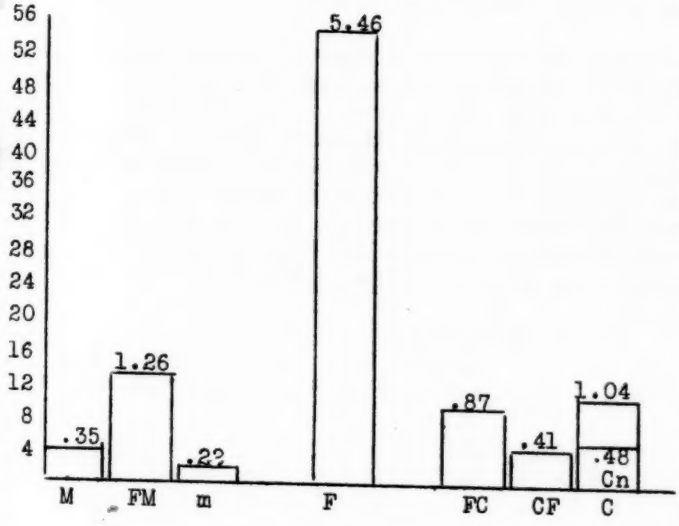
FM rises consistently as well in average number as in the proportion of children using this category. It also exceeds M consistently as well in average number as in proportion of children using it. This finding seems to confirm our interpretive assumption that FM represents a symbolic expression of instinctual drives which up to puberty naturally predominate in our inner life.

The average number of m as well as the proportion of children using it seems too small and irregular to warrant any specific significance in early childhood. The same is true about all the different shading reactions which we have not even included in our statistical survey. It may however be pointed out that scattered samples of the use of any one of the six shading categories (k, K, FK, Fc, c and C') may be found at all age levels.

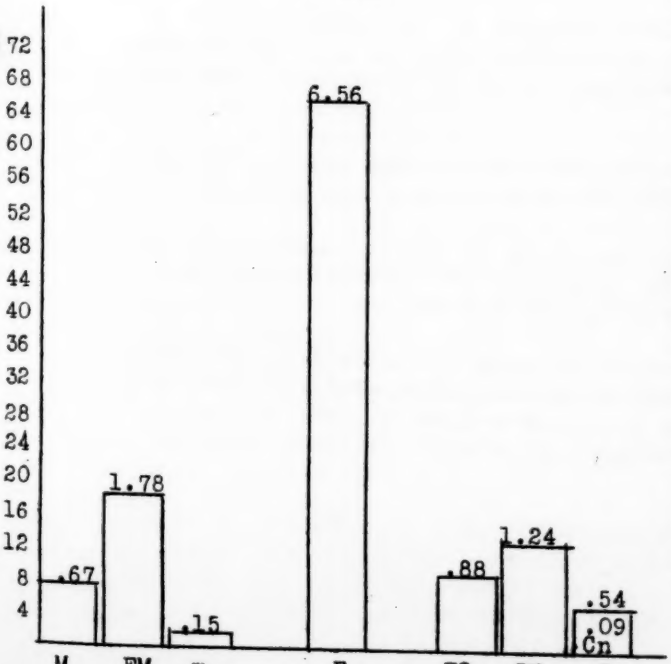
Composite Distribution Graphs of the Major Determinants in Each Age-Group



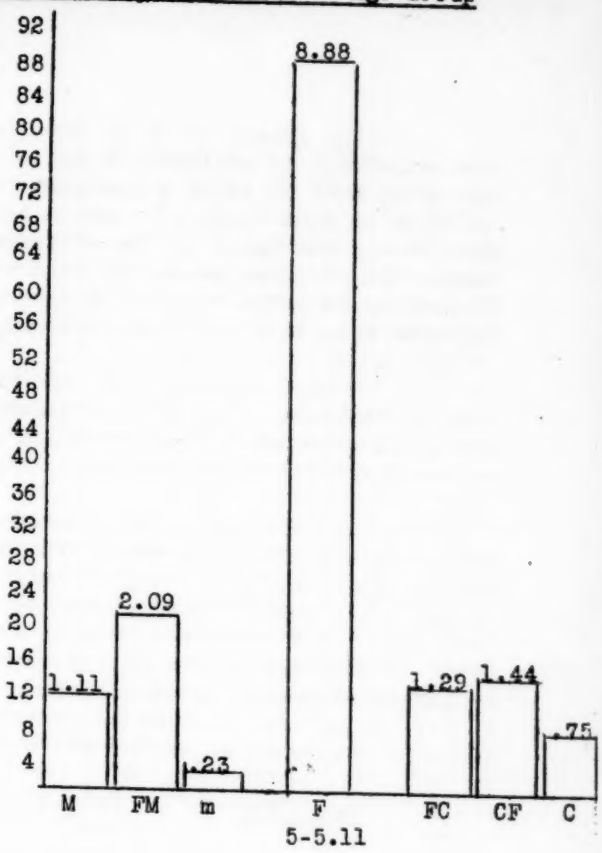
2-2.11



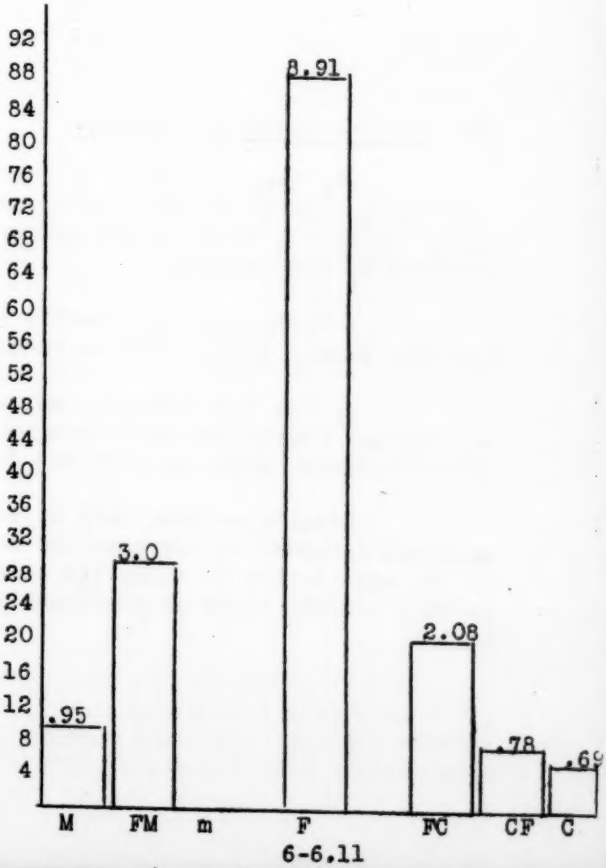
3-3.11



4-4.11



5-5.11



6-6.11

The growth of FC is more consistent in the average numbers than in the proportion of children using it. It is obvious that not until the last age group does FC reach a dominant position within the color reactions. The children in Alma Paulsen's sample had not yet reached this stage which is most likely due again to the difference in mental age distribution. In our sample the children reach the peak of their CF responses as well in average figures as in proportion of children using it between 5 and 6. Alma Paulsen's children keep this position obviously one year longer.

Pure C responses of all kinds have in average numbers and in percentage of children using it a dominant position within the first two years, losing it from about four years on. Within the different types of C responses we can observe a shift from Color naming (Cn) toward the pure C.

It is of particular interest that the average number of recognizable pure form responses increases from about 3½ at 2-3 years to almost 9 at 6-7 years. However, if we compare these figures with the corresponding increase in the total number of responses we find that throughout these five years the proportion of F responses remains rather close to 50% of the total. Another point to consider is the change in the quality or form accuracy level. This is partly expressed in the decrease of responses which have to be classified as F-. Using here Rorschach's original F+ concept within the limited area of our F responses we arrive at the following figures: (%F+ of total F)

Age Range	F+%(mF)	F%(in R)
2-3	70%	42%
3-4	82%	44%
4-5	77%	41%
5-6	86%	48%
6-7	94%	48%

VII Further Research Problems.

The very important qualitative analysis of our results has to be left for a further report. Among the qualitative problems we found particularly fruitful a study of the different ways in which W responses were constructed by the children.

A comparison of possible sex differences belongs also to the unfinished tasks, which could be accomplished with the material at hand.

In the same category belongs the study of typical contents on the various age levels and associated with it the possible establishment of special popular responses for the different age groups.

Finally we have only to mention the need for collecting additional material in order to overcome the statistical limitation mentioned before in the expectation to stimulate other Rorschach workers to participate in this special field of Rorschach research which will certainly never be boring.

RORSCHACHS OF SCHOOL BEGINNERS

by Alma Paulsen, M.A.

The Rorschach has been used in certain units of our Clinic during the past five years as a regular part of the psychological examination of children referred for intensive study by schools throughout the city. It has proved most useful as a diagnostic instrument - checking closely with the psychiatric diagnosis where this is obtainable, and often offering additional facts about a child's personality which are usually verified by later developments. In applying the Rorschach to children we have had to test out the assumption that children reveal their personalities in a manner similar to that of adults - in other words, that the underlying theory of the Rorschach is generally applicable to human personality. In general with the older school-age problem children, we have found this to be a valid assumption. That is, those Rorschach signs which would be regarded as pathological in the adult, are usually significant indicators in the child of 10 years and older. With the 6 and 7 year-olds we feel least secure in our interpretation. This is partly because fewer children are referred as problems in the first two years of school, and our experience with this age-group is therefore limited. We have undertaken a study to fill out this gap in our experience and also as a beginning in obtaining records on normal groups at various ages. The need for knowing what is the so-called normal or average response of children at each age level, has long been felt by clinicians; and although a number of investigators have reported on this problem, there has been too small or limited a sampling of cases at each age for conclusive judgment with reference to the general population. Furthermore, very few of these studies have dealt with the six-year old group.

To discuss in a short paper the Rorschachs of all school age children would obviously be impossible, for we know that the expected response is very different at different ages - and the problem cannot be dealt with generally. I propose instead to present to you the first stages of our study of normal six-year olds.

The children in this study included all of the 1A grade in a large central Manhattan public school. We chose this particular school because it is located in a cosmopolitan section, and because through the psychological surveys of the 1A grades and testing in upper grades, conducted by the Department during past years, we have learned that this grade is representative of the whole school. We have reason to believe that the group is as random a sampling as we could obtain. The children are all American born, and spring from a variety of racial stock. Judging from the names, we probably have 12 or 14 racial groups represented - many of the children have parents of different nationalities. Most of them speak English fluently, although a number of them know a foreign language as well.

The group comprises 82 children: 47 girls, and 35 boys, ranging in age from 5 yrs. 11 mos. to 7 yrs. 5 mos. Only one child, however, was older than 6 yrs. 10 mos. and for practical purposes we can consider the age range from 5-11 to 6-10.

Each child, in addition to the Rorschach, was given the Revised Stanford-Binet Form M, the Goodenough Drawing, and some simple achievement tests - and was observed by the psychologist during the course of the examination. In addition, we have in some cases, the teacher's comments on classroom

behavior. These, however, are limited because at the time of the study most of the children had not been in school long enough for the teacher to have become thoroughly acquainted with them.

The I.Q. distribution follows the normal curve fairly closely. Fortunately for our purposes, the boys' distribution and the girls' are very similar. The mean I.Q. for the boys is 98.2 with the median at 97.5, as compared with the girls' mean at 97.7 and median at 97.9. The range in I.Q. for the boys is 71. to 120, and for the girls 69 to 129. 12% of the boys are Superior, as compared to 9% of the girls, while 19% of the boys as compared to 18% of the girls are low-average or Borderline.

The three psychologists who administered the tests have had considerable experience with the Rorschach, and the method of giving it was carefully agreed upon at the beginning. The scoring was done by the person who had given the test, but all of the records were later checked and a few changes made in the scoring in order to make the data consistent. The problem of scoring is a difficult one with young children, because of their immaturity and vagueness. Furthermore they often will not stay with the inquiry long enough for satisfactory explanations (as one little girl put it, "I told ya it's a tree and now I'm going home"). Although a child's attitude toward the inquiry is revealing in the individual interpretation, there is frequently some doubt about the reliability of the scoring itself, particularly the differentiation between FC and CF, and the F+%. In spite of this question in individual cases it may be assumed that the errors will be more or less compensatory with this number of cases. Actually there was no question about the scoring (except for F plus) in at least 2/3 of our records.

It is not possible to deal in a concise paper with all of the data which we hope to compile. I shall limit myself here to a brief discussion of the trends revealed in the preliminary treatment of our data: first an indication of the sex differences, secondly a comparison of intelligence factors as revealed in the Rorschach and on the Stanford-Binet, and finally a brief consideration of the typical Rorschach signs in relation to other clinical findings.

Our children varied in their attitude toward the inkblots: some were intrigued, some bored, some found them distasteful. But in general, they took it as a game, were very expressive and vigorous in their reactions, and enjoyed themselves.

You may be interested in hearing some of the actual responses given by these youngsters. Among the rather typical answers to each of the cards are the following:

Card I. Bird, butterfly, flower are fairly common answers. Less frequently given, are paint, sky and moon. One child who gave a paint response to Card I perseverated all the way through - Paint and lipstick for II, lipstick paint, paint and lipstick for III, Paint and more paint for IV, Paint on V, VI and VII, back to lipstick and paint for the last three. This degree of stereotypy is, however, unusual at 6 yrs.

Card II. This card is second only to IX in the number of Color answers it provokes. Fire and exploding bombs, blood are often given but the animals - as "Teddy bears" are not infrequently seen. One outstanding answer to this card was "Two men made out of peppermint candy" for the top red.

Card III. As is usually true with older subjects, this is the card eliciting the greatest number of M response. Among the answers are: two ducks looking at red firework coming down, and "Two ladies going on a picnic." The men are sometimes seen as birds - once a compromise was reached in the form of "Chicken boys".

Card IV. Frog, bug, big man, butterfly, tree, flower.

Card V. Butterfly, spider, bunny.

Card VI. A Water splash, a mosquito bite, a brush, a banjo or violin, a chicken.

Card VII. A bridge of snow, two dog crackers, smoke, boats and lake.

Card VIII. Combinatorial answers are frequent on this card-the animals being related to the center part in some way. "Lions walking on stones", or "Two cats crawling up an old Xmas tree and rocks around the tree." "Flower" response here is fairly frequent. VIII is the only card to which no M response was given.

Card IX. The typical answer here, through somewhat unusually and cutely expressed as "It's a tree, it's a tree, and flowers on it". Card IX produced a greater number of Color answers than any other. A number of children saw in inverted position the woman with puffed sleeves. "Fire" also is common. This card rivals III in no. of movement answers.

Card X. Seems to call forth astronomical answers of elemental nature -- 'Moon and Sun," "Sun", "Stars", "Moon and Sky". Most of the children gave one of the popular answers here also - crabs, or rabbit, birds, or dog.

The average number of answers for boys, and for girls, was 15. Their responses include not only movement and color, but in a smaller percentage of cases, they have responded to black and white as color (C') and to differentials in shading for surface and depth answers as well (c and K). All but 28% of our children gave some color response. The most frequent of the Color responses was the CF, with pure C a close second. About half of the children - 49% of the boys and 57% of the girls - gave at least 1 CF answer, and a few less than half gave pure color answers (38% of the boys, 51% of the girls). Approximately one-fourth of them gave at least one FC response (26% of the boys as compared to 34% of the girls). The fact that the percentages of girls giving responses in each of the color categories is consistently (though only slightly) higher than these percentages for the boys suggests a slightly greater tendency in the extratensive direction on the part of the girls at this age. At any rate, the girls give significantly more pure C, and total Color. Turning to the M to C relationship, however, there seems to be no significant sex difference - about 59% of these children showed an extroversive balance, while in only 27% of the records is M greater than C. The extroversial swing at this age is seen also in the studies by Klopfer and by Dubitscher.

Another interesting sex difference is the greater tendency toward Movement response on the part of the boys - 57% of the boys have given at least one kinaesthetic answer as compared to only 38% of the girls. The relatively frequent occurence of M answers in this group of 6-year old children

is perhaps surprising - a really good M answer is considered by some a rather mature phenomenon occuring only rarely in children. Dubitscher for example, credits none of his 6 year-olds with M. In our scoring, we have given M- credit only in those cases where the child has spontaneously stated the activity involved (either at once, or during the inquiry if the intent was obviously there when the original response was given). It may be that there is psychologically a very real difference between the child's and the adult's perception of these kinaesthesias - but the difference is not apparent in the answers themselves, and although one suspects upon reading over the responses, that the child's delight in narrative sometimes artificially increases the "M", I can see no basis for not crediting as such a clearly stated kinaesthesia merely because it is given by a young child and does not fit in with our preconceived theories. Fairly typical of movement answers given by these children are the following: Card III "Two men dusting the floor", to Card IV "A big husky man walking", and to Card VII (Inverted position) "Two little girls dancing".

A slight difference between the boys and the girls is seen also in the mode of apperception - the girls tend to give more first, second, and third degree details than do the boys. In all of our data, of course, the individual differences are more marked than any differences between the sexes. It is interesting to compare these data on sex differences in these six-year olds with Rorschach's own comment about adults. We find this statement in his "Psychodiagnostic" (translated) "The differences are not so large as to force themselves upon the observation. In general, the number of wholes is somewhat smaller on the average with the female subjects, and the number of color answers somewhat larger, but there are numerous exceptions in every direction". We find the same trend among these 6-year old boys and girls.

We come next to a comparison between the Rorschach responses of the bright, dull, and average children - classified on the basis of the Stanford-Binet I.Q. Although certain trends are apparent, we must keep in mind the widespread individual differences which make it impossible to use any one or two factors predictively. With increasing intelligence there is a definite upward trend in the number of movement answers, the animal movement, and the human responses. The Form percent, (the number of F answers over total R), seems to be inversely related to intelligence. That is, the dull children tend to be the most constricted, while the superior children allow themselves freer expression - or really have a richer experience. We find, as expected, that the F plus percent increases with intelligence - the brighter children having clearer form perception, the duller, showing much more vagueness. Our figures indicate also that the number of Popular answers is higher among the brighter children - this fact is obviously related to maturity, since the P answers are those which adults give most frequently. It seems surprising that children at this age should share the adult associational background to the extent that very few of them - only 6 out of our 82 - gave no popular response at all. It is interesting to note here that although the superior children give more popular answers, they are also, if one is to judge from their greater number of white space answers, more assertive as individuals.

The ability to combine form and color in an FC answer, and also the use of shading (c and K) increases significantly from the dull to the average and thence to the superior group. The less gifted children give proportionately more pure C, but there is no significant difference in the mean Cf response of the three intelligence groups.

As for the apperception type, and the total number of responses, there does not appear to be an appreciable difference between the bright and dull children - on the average, the children gave about as many wholes as large details per record, smaller details being given relatively infrequently. We see a marked difference, however, in the quality of whole answers. The more gifted children even at this age are apt to give clearly perceived, well defined, or combinatorial wholes, while the types of whole response given most frequently by the duller children are the vague and definitely poor wholes. In spite of these general trends, there are of course cases in which the Rorschach points to a quality of intelligence not revealed by the Benet, and conversely, there are a few children with higher I.Q.'s than would have been predicted from the Rorschach. We hope to investigate further the qualitative and quantitative aspects of the Benet response as compared with the Rorschach.

The third part of this paper deals with the question, "What is the significance of the atypical Rorschach signs in the six-year old?" Accustomed as we are to dealing with the records of older children, about half of the Rorschachs on these six-year old children seemed in some degree pathological. It is obvious from this, that many of the signs which in older children would be indicative of disturbance, occur too frequently to be so regarded at the age of 6. Confabulation, stereotypy, vague form perception, absence of M, or of C, explosive color reaction, are quite common at this age. A combination of these signs, however, does seem diagnostically significant. The children also show reactions to the color - exclamations, remarks, card-turning, etc., which may or may not be "color shock" - it is much harder to differentiate at this age. The one single sign which seems definitely a pathological-indicator is the complete absence of popular response. As mentioned before, only 6 of our group gave none of Beck's popular answers: two of these are children of borderline intelligence; two were among those 11 children recommended for psychiatric or neurological examination on the basis of the clinical observations quite apart from the Rorschach and two were outstandingly infantile. There were, of course, a number of children who, probably because they had a sufficiently good persona to conceal their difficulties, were not recognized as problems under the ordinary clinical observation, but who revealed serious maladjustment on the Rorschach. It is also of interest that with one exception, every child whose behavior lead the psychologist to suggest psychiatric study, produced a disturbed Rorschach. Except for the extremes of maladjustment it is easier to pick out the conspicuously "normal" than to single out the pathological. We have not, as yet, been able to compare the school adjustment of these children with their Rorschachs. We hope to make some attempt at this, and also to repeat the Rorschach with as many of the group as may be available at two-year intervals during their school careers.

Although this is merely a preliminary study, the following trends seem significant in the response of 6-year old children:

1. A large majority show an extraversial M:C relationship.
2. The girls show somewhat more color response, the boys more movement response, but the overlapping is great.
3. Girls tend slightly more than the boys to large and smaller detail responses, while the boys give, on the average, more whole-answers.
4. Factors most closely associated with intelligence as measured by the Stanford-Binet are: Quality of wholes, number of M, FM,

and FC, number of human responses, number of P responses, the F% and the F+%.

5. The response at this age is qualitatively so different from that of 10 year old (probably even 8 year-old) children that the usual criteria (with the probable exception of Popular) for differentiating between the pathological and normal cannot be taken too literally. On the other hand, it does seem possible to single out the extremes through careful analysis of the whole record, particularly when we have additional clinical data for comparison and check.

We hope that the further treatment of the material and particularly the re-examinations of these children will lead to more conclusive findings.

PERSONALITY CHANGES IN ADOLESCENCE

Marguerite R. Hertz, Ph.D. and Elizabeth Baker*, M.A.

Studies of adolescent personality based on the Rorschach Method are in progress at the Brush Foundation to identify, and if possible measure, the personality traits characteristic of adolescence. According to Rorschach personality patterns are relatively stable but subject to profound changes at certain periods in the life of the individual. The present study attempted to identify any changes that might occur in the adolescent period.

Rorschach patterns which purport to reveal certain personality traits were analyzed in the records of 76 adolescents, 41 boys and 35 girls, tested at 12 and 15 years of age. The present report is a summary of the quantitative studies dealing specifically with the movement and color factors and their mutual interrelationships.

The data indicate that certain traits, as inner living, responsiveness to the environment, and the total amount of psychic energy available, show a moderate degree of stability. However significant changes are found to take place from 12 to 15 years and characteristic personality patterns are identified for the groups at these ages.

The 12 year old child tends to engage less in inner living and fantasy life, and responds more readily to the world about him. He tends to be livelier, more "labile" than stable, more excitable than controlled, more "outward" in his emotional behavior. Extratensive elements dominate the personality. By 15 years of age both boys and girls appear more introversive. The 15 year old adolescent tends to withdraw within himself. He is more creative. General responsiveness to the environment decreases. Fewer infantile patterns show, with less egocentricity and impulsiveness and fewer outbursts. There is a definite increase in emotional adaptability and stability.

Therefore one may conclude that there are profound changes taking place in the personality of the adolescent, from extratensiveness at 12 toward introversiveness at 15 with an attendant increase in emotional adaptability and stability.

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THE RORSCHACH TEST AS A TOOL FOR INVESTIGATING CULTURAL VARIABLES AND INDIVIDUAL DIFFERENCES IN THE STUDY OF PERSONALITY IN PRIMITIVE SOCIETIES

A. I. Hallowell, Ph.D.

The Rorschach test presents to the subject a series of ten symmetrical, although amorphously structured, fields of visual stimulation (ink-blots). By means of an initial vocal suggestion he is stimulated to invest these fields with representational values, rather than to see them as meaningless forms or empty designs. Because of the relatively unstructured and unconventional character of the stimuli, they are open to all sorts of interpretations. Consequently the subject is given a relatively wide scope for the play of imagination, free association and the operation of projective processes. He restructures and injects meaning into the stimulus fields presented in terms of his own experiences. When interpreted, the specific mode in which he responds to them, the quality of the apperceptive responses obtained, the particular content with which he invests the stimuli presented and the originality of his responses, are presumed to be of psychodiagnostic importance.

The quantitative and qualitative evaluation of the responses already obtained from representative series of normal children and adults, from feeble-minded, neurotic and psychotic individuals, substantiates the significance of the Rorschach procedure as a fruitful avenue of approach to the study of personality variables. (1)

With few exceptions (2), however, the individuals so far tested have been those with a European or American background, (3)

At the same time Wells has pointed out (4) that "at every turn the meaning of Rorschach response is modified by imponderable factors of culture". In broad terms this simply means that the experiential backgrounds of the subjects as members of a given human society who share a common cultural tradition, a common professional background (Wells, op. cit., refers to the frequency of anatomical responses among medical students) or some other equally discernible conditions of life or thought, will be evident in some degree in their responses to the Rorschach material.

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(1) P.E. Vernon (Recent Work on the Rorschach Test, Journ. Ment. Sci. (1935) says that the method is now being employed in 15 countries and a dozen different languages. Beck thinks the number of countries is closer to 40 (Autism in Rorschach Scoring. Character and Personality, P, 1936, p.83.)

(2) See M. Bleuler and R. Bleuler, Rorschach's Ink-Blot Test and Racial Psychology: Mental Peculiarities of Moroccans. Char. and Person. 4:97-114, 1935. The results obtained in this study have not been published in full and the material collected upon a few American Indian groups has not been worked up.

(3) Margaret Mead in her "Investigation of the Thought of Primitive Children, with Special Reference to Animism" J.R.A.I. LXII,1932, exposed a set of ink-blots she made herself (p. 178) to the Manus children and recorded their comments (see p.184) Cf. Growing Up in New Guinea p. 127.

(4) F.L. Wells, Rorschach and the Free Association Test. Journ. of Gen. Psych. 13 p.428, 1935.

Such cultural factors may be considered of subordinate importance in the results obtained so long as they remain relatively constant for the individuals of a given group and attention is centered entirely upon the significance of the differential responses for the psychodiagnosis of particular individuals. On the other hand, it would seem that the Rorschach material likewise has possibilities as a tool in the investigation of problems in comparative social psychology if employed as a means by which the relatively constant responses of a series of individuals reared in one cultural milieu may be differentiated and compared with those of another series of individuals who have lived under totally different conditions. It might then be possible to explain these group responses in terms of the specific culture patterns or conditions of life that prevail in different societies. The Rorschach method thus provides a means of systematically attacking certain aspects of the relations between personality and culture.

In terms of the categories in which the responses to the Rorschach Test have been evaluated the central problem in such inter-group comparisons would be to discover the influence of cultural variables in the determination of (1) Mode of apperception. (Erfassungstypus): what is looked at; the figure as a whole or a particular part of it; (2) Quality of apperception (Erlebnistypus): how is the stimulus field looked at. Was the cue essentially shape, movement, color? If shape, were the forms sharply perceived, etc. (3) Content of apperception, i.e., what is seen. Was the thing seen a person, animal, inanimate object, etc. (4) Originality of apperception: to what extent are the responses original.

It is, of course, impossible to predict in advance the range of variability in group differences. But the Moroccans investigated by the Bleulers exhibited an Erfassungstypus quite distinct from that found among Europeans; they responded with great uniformity to a wealth of small details. The investigators linked this, among other things, with the cultural emphasis laid upon detail in their art tradition.(1) There may, however, be other experiential factors involved. Most of the Saulteaux Indians whom I know at first hand are not familiar with pictures or photographs and my impression is that, when first presented with material of this sort they have sometimes failed to grasp the significance of the whole and have centered their attention on some recognizable detail. Through the use of the Rorschach method in this group it might be possible to demonstrate a concomitant variability in Erfassungstypus and familiarity with pictorial material by comparing the responses of school children with those who have had no schooling.

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(1) They also imply that racial factors may underlie both. But this part of their discussion is vague and completely hypothetical. I cannot agree with Vernon, op. cit. p. 915, that "since the ink-blot material is less open to the objection of cultural determination (except as regards the content category) than most tests" it can be directly employed in the exploration of racial differences. For it seems to me that there is considerable expectancy that more than the content category is influenced by cultural variables. Before racial factors can be evaluated, at least, the possible influence of cultural variables requires prior exploration.

With respect to the quality of apperception, one might expect some distinguishable group differences in color responses, since to some degree at least such responses involve cultural constituents and to this extent are a function of certain aspects of a particular cultural tradition. We occidentals, e.g., are extremely color conscious and this fact cannot be altogether dissociated from an art tradition in which painting has exploited the nuances of color, to say nothing of the extent to which the use of dyed fabrics exhibiting an extremely wide range of color values has permeated daily life since the last decades of the 19th century and the still more recent development of color processes in connection with printing. Concomitantly, our color vocabulary has been enriched and we are accustomed to make all sorts of refined color discriminations and to evaluate color for its own sake. I feel sure that to the Saulteaux color as such is less abstracted and consequently might prove to be appreciably less important in the quality of their apperceptions.

It likewise seems possible that sharpness in the discrimination of form may be a group as well as an individual variable related in demonstrable ways to certain aspects of particular cultural traditions.

In respect to content and originality one would expect the range in group differences to be considerable and that the correlation of the responses with cultural conditions would be high. The percentage of animal responses might prove a significant field for comparison. Among Europeans and Americans, e.g., animal responses are relatively high among the feeble-minded, although not as high as Rorschach himself thought(1). Children in general also give more animal responses than adults. On the basis of this material the incidence of animal responses, when frequent, has been interpreted as an indication of sterotypy in thought and action. In the first place we do not know whether the greater frequency of animal responses among children is true of children under all cultural conditions or only under those represented in occidental society. Secondly, if inter-societal variations should prove considerable, is it not possible that the psychodiagnostic significance of animal responses might have to be re-evaluated with reference to such conditions?

The Saulteaux Indians should provide some interesting material in this connection as they are a hunting people and all individuals are familiar with many kinds of wild animals throughout life. In this group it would be interesting to know whether the frequency of animal response also shows any significant correlation with the age and experience of individuals on the ontogenetic scale.

In regard to the content of responses it would likewise be interesting to discover how far primitive peoples project folkloristic material or dream fantasies into the stimulus fields presented by the ink-blots.

At any rate, the determination of whatever group peculiarities exist among various peoples would not only be of intrinsic interest, it might be the means of defining some nice problems in comparative social psychology for further investigation. Moreover, the accumulation of cross-cultural material through responses to the Rorschach material would also be valuable from another point of view. It should throw into greater relief the norms that are being developed as a frame of reference for the evaluation of individual responses

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(1) See S.J. Beck, The Rorschach Test as Applied to a Feeble-minded Group. Archives of Psych. #136, 1932, p. 45-49.

to these tests in our own society. For example, mental defectives in our society give many detailed responses and children in general give fewer whole responses than do adults. It is quite obvious that comparable responses among Moroccans must be explained by some other causes than mental deficiency or immaturity.

It probably will be necessary, then, to build up an adequate sample of the responses of individuals in any primitive society before the full significance of the individual responses of members of this society can be fully exploited with respect to their psychodiagnostic import(1) or successfully compared with the psychograms of individuals reared in occidental societies. Otherwise the "imponderable factors of culture" of which Wells speaks remain imponderable and cannot be fully evaluated in interpreting the responses of individuals with quite distinct cultural backgrounds.

The Berens River Indians provide a significant field of investigation in this regard. I am already acquainted with several individuals who exhibit neurotic symptoms, one man in particular having suffered severe phobias for many years of his life.(2) On the one hand, it will be interesting to discover how the psychograms of such individuals differ from other Indians of the River and, on the other, whether they are comparable in any details to the psychograms of individuals of the same psychological category in our society. If a direct comparison with individuals of this latter group is possible, then, of course, it would indicate that cultural factors need be given less weight than might be expected.

Another case in which a similar double comparison might be instituted is that of a dissocial (possible hysterical) girl whom these Indians judged to be "crazy".(3) There are also two or more feeble-minded individuals who might be tested.

Proceeding in turn from the opposite direction (i.e., a systematic sampling of the responses of adults and children) it is possible that the use of the Rorschach procedure may reveal deviant responses which may give clues to significant personality differences that are by no means overtly obvious.

Finally, there is the possibility of obtaining at least a core of data on the personality organization of the more common run of individuals that will be of genuine psychodiagnostic value.

It would seem, then, that experimentation with the Rorschach Test in primitive societies may open up a fruitful line of research with respect to significant group, as well as personality, differences.

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(1) E.g., an evaluation of original as opposed to "banal" responses. Cf. Vernon, op. cit.p895(n) who, with reference to Beck's norms remarks, "This list, when available will not be immediately applicable to British testees. The originality and commonality classifications are sure to be different in a different social and cultural environment, and the F+, F- and D, Dd distinctions may require revision." Cf. M.R. Hertz, The Normal Detail in the Rorschach Ink-blot Test, Rorschach Res. Ex., vol. I#4, especially p.115 where some of the factors relevant to varying norms are referred to.

(2) See A.I. Hallowell, Fear and Anxiety as Cultural and Individual Variables in a Primitive Society. Journ. Soc. Psych. vol. 9, 1938.

(3) See A.I. Hallowell, Shabwan: A Dissocial Indian Girl, Am. Journ. of Orthopsychiatry. (In press).

THE STABILITY OF THE RORSCHACH METHOD AS DEMONSTRATED IN ELECTRIC CONVULSIVE THERAPY CASES.*

by

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Since 1928, when Cerletti and Bini (1) introduced the technique of electric convulsion therapy it has been noted by many observers that patients subjected to electric shocks develop various types of transitory amnesic states following the shock. We find that these amnesias may briefly be classified into three groups: (1) those in which amnesia for events immediately preceding the shock is very mild and transitory; (2) those cases in which the amnesia is partial or insular in type with the ability to remember certain events preceding the shock, and (3) those cases in which there is a complete amnesia for several hours following shock during which the patient is completely unable to recall any event which has transpired during 2-3 hours preceding and during the application of the electric therapy.

Consideration of this last group indicates that these patients could be utilized in various studies in the psychiatric field in an attempt to check both quantitatively and qualitatively certain psychiatric procedures. These are patients whom we can test before a shock and who, following the shock, though apparently clinically unchanged have a complete amnesia for the previous administration of the test and consequently the same tests can be given twice to the identical patient without the complicating effect of recent memory recall.

It seemed particularly advantageous to study this group of patients with the Rorschach method because, while clinical workers have heretofore claimed that repetition of the Rorschach responses made little difference in the resulting psychogram, but little experimental work has been done in this field. In these cases there is an opportunity to administer the test to the same individual and to then readminister it after a very short period without the complicating factor of repetitive responses recalled from the previous administration, an experimental situation which is unique in research with the Rorschach method.

Procedure

Cases were selected at random from among the patients undergoing electrical shock treatment and were clinically studied to determine their mental status on the morning of the treatment. Following this a Rorschach was taken, according to the method as described by Klopfer (2), and the patient immediately given an electric shock as described by Kalinowsky and Barrera (3). The patient was then carefully watched, and as soon as the transitory confusion had cleared, was again checked clinically to determine his mental status and the type of amnesia which resulted. Following this a second Rorschach test was administered.

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Material

Of 30 cases thus studied, 5 were found to have no amnesia, 5 partial amnesia and 8 showed clinical signs of confusion, so that these Rorschachs consequently were of no value in the present study. None of these cases were used for this survey, and we were left with 12 cases who showed a complete amnesia without confusion. Five of these were males and 7 were females. All were adults with diagnoses as follows: Four depressions - 2 manic depressive depressed, 1 psychoneurotic depressed and 1 reactive depression; 4 dementia praecoxes - 2 hebephrenic, 1 simple and 1 catatonic; 3 involutional melancholias; and 1 anxiety hysteria. All cases were selected at random solely upon the facts that they showed no mental confusion together with a complete amnesia which included (1) inability to remember any of the cards at any time, (2) the necessity of having to explain the technique of the test as though it had never been given previously, (3) no sign of memory by the patient either for the test, or (4) for the examiner, in spite of careful and specific questioning on this point.

Results and Discussion

In giving the results and discussion of the Rorschach findings in this study, it seems advisable to consider both the results and their evaluation together. This method of approach is most useful in view of the fact that the results are merely a summation of Rorschach scores which consist simply of numerical figures which, taken separately, are meaningless and which also must be considered in the light of the entire Rorschach responses. It is necessary at this point to emphasize our realization of the fact that twelve cases is not a large series, and that purely statistical correlations would be of little value. We have, therefore, in this preliminary study, only tried to evaluate those trends which occur in all cases and have deliberately avoided consideration of the occasional isolated shifts which occur in single cases.

Scoring was done independently by two of us (DMK and HM) according to the method of Klopfer using also the experience with Piotrowski and Oberholzer and the works of Beck and Rickers-Ovisiankina.

In general, in every test, the psychogram produced was essentially unchanged before and after the electric shock and the diagnosis made from the Rorschach findings was in exact accord with the clinical impression. Clinically, these patients show no change of any type psychologically before and after a single shock and, since the Rorschachs were taken within 2 hours of each other, it seems reasonable to assume that the individual had not changed, from an observable clinical point of view, in any way with the exception of the amnesia. The Rorschachs then would not be expected to change either, and the psychograms indeed remained constant. It is true of course that a series of electric shock treatments will produce a profound personality change in many cases as described by Cerletti and Bini (1), Fleming et al (4), Shepley and McGregor (5), Solangi (6), Kalinowsky (7), and Kalinowsky and Barrera (3). To determine these changes, however, a long range study is required including a comparison of pre-shock records with records taken at the conclusion of all shocks. This work is being undertaken as well as Rorschach studies correlated with electroencephalographic findings, but for the present communication we are interested only in records taken on a single day, before and after a single shock, which produces no observable clinical personality change. In this study we are purely

TABLE I

CASE:		1	2	3	4	5	6	7	8	9	10	11	12
Time per	Pre	32"	24	46	26	32	30	25	25	18	25	68	42
Response	Post	1'48'	13	37	28	26	28	43	35	11	49	31	23
	Pre	10	9	13	10	15	8	9	16	39	15	19	12
R	Post	7	14	9	9	17	10	7	11	30	12	19	9
	Pre	5	4	5	7	10	7	5	7	9	4	4	11
W	Post	3	7	6	9	10	7	3	7	8	4	4	8
	Pre	4	4	8	3	4	1	3	9	23	10	14	0
D	Post	3	6	4	0	6	3	4	4	18	7	15	2
	Pre	1+2	1	1(weak)	1	6	0	1+1	2	5	1	3	0
M	Post	3	1	0	0+1	6	0	0+1	2	5	1	3	0
	Pre	2	3	1	0	1	1	2	4	6	1	1	1
FM	Post	2	3	1	0	0	1	3	3	5	1	1	1
	Pre	0	0	0	0	0	0	0	1	1	0	1	0
m	Post	0	0	0	0	0	0	0	1	0	0	1	0
	Pre	0	0	0	0	0	0	2	0	0	0	1	0
K	Post	0	0	0	0	0	0	1	0	0	0	1	0
	Pre	0	0	0	0	0	0	0	0	0	0	0	0
FK	Post	0	0	0	0	0	0	0	0	0	0	0	0
	Pre	70	33	85	80	20	50	33	19	33	56	52	83
F%	Post	20	43	90	78	35	70	43	9	37	56	52	84
	Pre	0	0	0	1	1	0	0	0	1	0	1	0
Fc	Post	0	0	0	1	1	0	0	1	1	0	1	0
	Pre	0	1	0	0	1	0	0	2	2	0	0	0
c	Post	0	2	0	0	1	0	0	1	0	0	0	0
	Pre	0	0	0	1	2	0	0	3	7	1	0	0
C'	Post	0	0	0	1	2	0	0	2	3	1	0	0
	Pre	0	0	0	0	1	1	0	1	0	1	0	0
FC	Post	0	0	0	0	1	1	0	0+1	0	1	0+1	0
	Pre	0	1	0	0	0	0	0+1	0	3	1	1	1
CF	Post	0	1	0	0	0	0	0	0	3	0	1	1
	Pre	0	0	0	0	0	2	1	0	2	0	1	1
C	Post	0	0	0	0	0	1	0	0	2	0	1	0
	Pre	1:0	1:1	1:0	1:0	6:0.5	0:3	1:1.5	2:.5	5:6	1:1.5	3:2.5	0:1
M:sum C	Post	3:0	1:2	0:0	0:0	6:0.5	0:2	0:0	2:0	5:6.5	1:0.5	3:2.5	0:1
(FM+m):	Pre	2:0	3:1	1:0	0:2	1:3	1:0	2:0	5:5	8:10	1:2	2:1	1:0
(Fc+c+C')	Post	2:0	3:2	1:0	0:2	0:4	1:0	3:0	4:4	5:4	1:1	2:1	1:0
	Pre	30	33	38	30	27	38	33	38	31	47	42	33
%VIII-X	Post	20	36	30	33	29	30	29	27	30	42	46	11
	Pre	5:1	4:1	5:1	7:1	10:6	7:0	5:1	7:2	9:5	4:1	4:3	11:0
W:M	Post	3:3	7:1	6:0	9:0	10:6	7:0	3:0	7:2	8:5	4:1	4:3	8:0
	Pre	5	4	6	2	4	1	1	7	3	6	5	3
P	Post	2	7	4	2	7	2	3	4	4	7	6	3
(H+A):	Pre	7:3	6:2	8:5	6:0	10:2	4:0	3:0	11:1	12:7	12:1	12:0	8:1
(Hd+Ad)	Post	6:1	8:7	7:3	5:0	12:2	5:4	4:0	8:1	13:4	11:1	14:0	5:0

interested in the electric convulsive therapy as a method of supplying us with a particular type of patient for study, and not in its therapeutic results. Such aspects will be taken up in later communications.'

As regards specific factors a summary of all the major scorings for each case is given in Table I. The case numbers are listed across the top of the table and the various individual factors of the Rorschach method are arranged at the side, abbreviated as described by Klopfer and Davidson (8). Each factor has 2 lines assigned to it labeled (pre) and (post) indicating the findings before and after the electric shock.

In studying these individual factors, we find, in the timing of the test, that five cases showed an increase and seven cases showed a decrease in average time per response. In all except 1 case there is a difference of only a few seconds and in general this factor seems to be of little significance in this study and shows on the whole little change.

In considering the total responses (R) we find in most cases fewer responses given after the shock. The change in responses varies from an increase of 5 in one case to a decrease in 9 in another but on the whole none of the cases show any marked variation. That there is some variation in all cases is evident, however, and we shall now see how it is represented in the various areas and determinants of the responses.

In studying the areas of response, we find that the whole (W) responses show shifts of never more than 1 to 3 responses regardless of the amount of change in the total response. Only two cases showed a shift of 3, three cases a shift of 2, and seven cases a shift of 1 or none. In the details (D) responses the shifts are somewhat larger, shifts of 4 or 5 responses are quite common, and definite shifts occur in every case. In the other categories, small detail (d) rare detail (Dd), and space (S) answers, too few responses were given to draw any conclusions. From these findings we may then say that the W response is much more stable than the D response, maintaining itself in general regardless of any change in the total response. The D seems to shift somewhat in every case in which a shift in R occurs to a larger degree and consequently must be considered less stable than the W.

The various determinants are our next field of study. Let us first consider the human movement (M) responses. Here eight cases or 67% showed no changes and four cases showed changes of 1 or 2 movement answers. Superficially looked at from a numerical point of view these would seem to represent major shifts, but if each case is examined independently, it can readily be seen that the shifts are inherent within the pre and post records themselves, being shifts only from additional to main responses or vice versa, rather than the development of any new responses or the deletion of ones previously given. In case #1, in the pre-treatment record, there were one main response and two additional responses. In the post-treatment record 3 main responses were given including the original single main response and the 2 additional ones. In case #3 we find the dropping out of a response which when given in the pre-treatment record was very doubtful, barely admitted, and almost rejected. In the post-treatment record this particular card (III) was rejected entirely. In case #4 there was one pre-treatment response and the same response was given in the post-treatment record as a spontaneous additional. In case #7 there was 1 pre-treatment response and in the post-treatment record this same

response was again given as a spontaneous additional. In these 4 patients then, only 1 case actually had a shift (a drop of 1) and in this case the original M response was so weak as to be hardly creditable. These findings indicate then that the M determinant is very stable within the record, providing that certain additional responses are considered to be nearly, if not equally as important as the main response.

The types of additionals indicated in these cases are: first, a response given as a main response and, later, completely denied, and second a response which occurs as a spontaneous original response given during the inquiry without pressure from the examiner. These types of additionals do not include additional scorings included to account for extra determinants in single responses given in the original record.

As regards the rest of the main determinants, with the exception of the form per cent (F%), nine patients showed a shift of only 1 determinant, of a magnitude of 1 throughout the entire study. This means that, with the exception of the one characteristic, F%, nine of the patients or 75% showed shifts in the determinant group of none or only one response throughout the entire list of determinants, if we accept the value of the additional responses in the M group as indicated above. These shifts were scattered throughout the group and in no case did it change the diagnostic value of the test in the slightest degree. These findings show on the whole the determinant groups are very stable with the exception of F%. In the three cases which did show shifts, careful analysis of each individual case permits us to understand the mechanism taking place. In case #7 there was a shift in the FM, M, K and C responses. Here the shifts, with the exception of C, are shifts in which an increase or decrease of only 1 response meant little from a clinical point of view and the C response again was given as a strong additional response in the same way that the M answers were given. This case then shows essentially no change at all in its record, if the additional responses are taken into consideration. In cases #8 and #9 there was a definite decrease in the c and C' answers and a small drop in the FM responses. Both of these cases were, although not confused, quite groggy and much less tense and agitated following their treatment. Since it has been assumed that the small c and C' factors except in artistic individuals indicate clinically inner tension, agitation and depression, it is quite understandable that if the patient following treatment were groggy and drowsy he would clinically show less anxiety and this would be reflected in the Rorschach. This is precisely what happened and in these cases, case #9 which was the least anxious and sleepiest showed the greatest drop. Also, both of these cases had the largest total number of responses and the percentage value of the decreases are consequently minimized. In neither case was there any change in the total pattern sufficient to permit any change in the Rorschach diagnosis except the indication of decreased anxiety and depression which is clinically parallel.

As regards the F% we find that it shifts considerably with changes varying from increases of 20% to decreases of 50%. These figures must be considered very cautiously, however, in view of the fact that in some of the cases in which the larger shifts occurred very few answers were originally given, and an increase or decrease in 1-2 answers, as in the case with a 50% shift, would consequently represent a very large change in per cent. On the whole, however, the F answers do show a much greater variation throughout the entire series than does any other single determinant factor, and consequently we must assume that changes in the total responses (R) are taken up in the F%

determinant. This is essentially what we would expect from previous Rorschach knowledge, in view of the fact that the simple F% is the least important determinant, and that changes in the F%, unless of considerable magnitude, are of no significant clinical import. This is particularly borne out by the fact that the level of 50% is accepted for F% as the dividing line for F% evaluation, and in none of our cases did a shift occur of sufficient magnitude to cause a crossing of this accepted percentage line with the exception of case #1. This case, however, had only 10 responses and so its % shifts are magnified, as previously pointed out.

From a study then of the determinants, it seems reasonable to assume that none of the determinants show any variation sufficient to change the clinical findings of the Rorschach record before and after the electric shock. We must further conclude that all of the determinants are very stable with the exception of the F% and that any occurring shifts of any degree in the Rorschach will be taken up by this determinant. Finally, we have evidence to show the important value of withdrawn and spontaneous additional responses and the necessity to carefully consider the value of these responses in any record. In the two cases in which the most changes do occur, we have some slight clues to validate our previous empirical assumptions that the c and C' responses indicate anxiety and depression, and we are able to account for these two apparent case exceptions by finding comparable clinical changes due to drowsiness of the patient.

In studying the ratios derived from the determinants we find that the M:sum C ratio and the (FM+m):(Fc+c+C') show shifts too small to be of any significance. In the M:sum C ratio a shift occurs in only two cases which changes the direction of the basic pattern and here only by a difference of 0.5 sum C which is of no clinical importance. In the (FM+m):(Fc+c+C') only one case showed any change in the direction of the original ratio and here there is simply a reversal from 4-5 to 5-4. Constancy, therefore, is maintained almost completely in both of these ratios. When we study the per cent answers in cards VIII, IX and X, however, we find a definite instability averaging about 5% except for one case. In this case, #12, there was a shift of 22% but here again we have 2 responses given in the original record which were denied in the inquiry, and if we include these two responses we only have a 3% shift. It seems then that this particular factor is less fixed than the other two ratio factors and in view of the hypothesis that this quotient acts as a balance to counteract changes in personality shifts in order to maintain customary environmental relationships, we would expect this factor to be definitely more labile than the other two. This expectation is borne out in this study and substantiates the theory suggested by Kelley and Barrera (9) that this factor represents a type of balance, probably unconscious, which attempts to maintain customary environmental relationships in the face of shifts in the original personality configuration and that it does not represent any basic pattern reflected clinically except in extreme cases of emotional environmental reactions. In view of the fact that the M:sum C responses show the least change and the per cent answers in the last 3 cards show the greatest variation it would seem that these assumptions are supported by the present findings.

A second result of a study of this factor indicates that in ten of the twelve cases, the shifts which occur bring the percentage of responses to cards VIII, IX, X below or above the specific 30% level which has arbitrarily been selected by Klopfer, Burchard, Kelley and Miale (10) to indicate

trends toward withdrawal from external situations. This does not mean that the 30% level is not a good one, but rather merely emphasizes the importance of the avoidance by Rorschach workers of any arbitrary single specific statistical figure and indicates the need of consideration of fairly variable levels for quantitative estimation. The percentage (30%) was merely selected as a convenient approximation and it must be emphasized that a difference of 5% either way makes little difference in the final evaluation of the Rorschach results.

As regards the W:M quotient we find that in 10 cases there is no significant change from a clinical viewpoint and in the other two cases there is merely a change of from 5:1 to 3:3 and from 4:1 to 7:1. In the other cases that show any change whatever in either component, the basic ratio continues undisturbed. These findings seem to substantiate the stability of this quotient and indicate that it remains fairly constant.

In regard to the (H+A):(Hd+Ad) ratio we find that only two cases show any questionable change, and in both of these the trend is definitely continued. This factor seems very stable and must be considered of importance as a constant factor.

The variation in the number of popular (P) responses shows that this factor is most unstable. In two cases there is no change, seven cases show an increase of from 1-3 responses and three show a decrease of from 2-3 responses. This factor seems to show an indiscriminate variation regardless of any other relationships, and it is impossible to predict how this factor will react in the post-treatment Rorschach. This finding is important in view of the value which has been set upon the popular response. It may be that this value has been over emphasized, or it may be equally true that the popular responses in current use today are not actually true popular responses, and that there may be an imperative need for an intensive survey in a very large number of cases to determine the validity of the 10 popular responses customarily scored. Original responses when used in all cases remain unchanged.

As regards the content, we find that it maintains itself quite stably showing so far as we can determine no change in any of the major percentages. Also, there seems to be no significant change in the type of content utilized as, e.g. the use of aggressive or passive forms. This is as would be expected in view of the very small changes which actually occur throughout the records.

In summing up the results noted, it should again be emphasized that the few changes that actually do occur are of very small dimension and consequently shifts of as little as 5% are magnified and made over obvious. All the important factors concerned show no or almost no shifts of any type with the exception of the R, D, F% and P groups and proportion of responses in the last three cards. No other factors begin to show such definite shifts either in regard to magnitude or frequency as do these categories. These findings demonstrate then that if the total responses are increased or decreased one may expect shifts of area to occur in the major details. (Minor details may play an important part here in very extensive response shifts, but none occurred in this series). In the determinant groups such shifts will be reflected in the F%, in the P% and in the per cent answers in the last 3 cards. These findings open these three categories to considerable question as to their fundamental consistency and stability and point to the danger of over-

emphasizing the quantitative value of any of these factors. They may serve as absorbers to take up any shifts occuring in the total responses which do not directly indicate personality shifts, and as such must not be over-estimated in interpretative value in clinical Rorschach work.

As regards the percentage of answers in the last 3 cards, however, it is our opinion that this factor is of important interpretive significance and that the instability indicated here merely represents the presence of an inherent capacity to shift, which would be required by the previous theoretical and experimental evaluation of this factor. If this factor is to act as a balance it would necessarily need to be quite labile and shifts such as do appear in this study in no instance are great enough to be clinically significant but seem to merely indicate the basic mobile ability of this factor thereby tending to validate previous assumptions. In consideration of the D, P and F per cents, however, we find that these are more unstable, the P shifting without any apparent reason whatsoever and the D and F shifting as does the R. It is interesting to note that in clinical practice with the Rorschach technique these three factors have never been over-emphasized and are considered relatively unimportant except in instances of marked distortion of these factors. This study confirms this clinical impression from an experimental point of view, and demonstrates the need of caution in interpretations based solely on statistical quantitative compilations involving slight changes or shifts in these particular elements.

Aside from these specific points, this study is also of considerable definite value in verifying the basic stability of the method as a whole. In each of the twelve cases we find no true clinical change except the transitory amnesia, either in the patient or in the Rorschach pattern. Such infrequent differences as do occur are more apparent than real, and we must not be confused by the presence of minor discrepancies which may occur between the pre and post shock records. Even when the Rorschach responses are broken down into separate components and considered individually -- a satisfactory statistical though almost useless clinical procedure -- they still hold up except for very minor changes and actually are statistically reliable from an academic psychological point of view with the exception of the few variant categories indicated above. It seems justified, therefore, to assume that the method is basically stable and that it measures the same areas of an individual each time that it is applied.

In this study we have the very unique experimental condition of having no apparent clinical change, except an amnesic state of short duration, in the subject and no complications of repetitive memory effects. It is true, of course, that deep within the individual's personality there may be some memory retention or hold over from the previous test, but in none of the cases was the patient able to consciously utilize this material, and consequently we must assume that the Rorschach method measures personality traits deeper than those indicated by conscious memory recall. It is of particular interest in working with these cases to note that in every case that showed partial or no amnesia certain responses were definitely given simply because they were remembered from the previous administration and the patient would state, "This is the bat I showed you" or "This is the card on which I found an animal, here it is" etc. In none of the cases used for this experiment did such quotations occur; and in many of the cases where combination whole responses were given, it was possible in the post electric shock study to watch the patient start out exactly as he did in the pre-electric Rorschach administra-

tion, and build up his response step by step without the benefit of obvious memory to finally arrive at the resultant response which was exactly the same as given previously. For these reasons we feel that this procedure is of value in securing patients who can not utilize obvious memory recall, and we can assume that whatever the personality level the Rorschach method measures in an individual, it measures the same thing each time unless, of course, some specific factor causing basic personality shifts has occurred during the interval between administrations of the method.

Summary

In summation of the results of this experiment we find:

(1) Patients following electric convulsion shock with complete amnesia and no confusion show no clinical psychiatric changes, except for the amnesia, and no changes in the fundamental Rorschach pattern.

(2) In analyzing the specific categories of the Rorschach responses we find that all areas and determinants are essentially stable showing at the most a change of only an occasional single response except for the total number of responses (R), the large details (D) the form per cent (F%), the per cent of responses in cards VIII, IX, and X and the popular (P) responses. These areas and determinants seem to be more labile, less stable and consequently less important from a quantitative point of view than the other determinants.

(3) The Rorschach method on the whole seems to be fundamentally quite stable and apparently measures the same portion of the personality with the same results even when the function of recent memory recall has been removed from the patient.

(4) No change except amnesia is found in the clinical appearance of the patients following a single electric shock convulsive treatment and the total Rorschach interpretation is likewise unchanged.

(5) Long range Rorschach studies on completely treated cases are indicated together with the need for correlations of the Rorschach findings with other fundamental techniques such as the electroencephalogram.

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ANNOUNCEMENTS

ANNOUNCEMENT OF THE TRAINING COMMITTEE

The Training Committee wishes to announce that all applications for membership and fellowship, submitted prior to January 15th, have been carefully studied and acted upon. At the end of this announcement will be found a complete list, brought up to date, of all active members and fellows of the Rorschach Institute.

In view of the fact that the next session of the Training Committee will be held at the Annual Meeting in June, applications and qualifying data for new members, must be in the hands of the Committee by June 1st so that their applications can be passed upon before the Annual Meeting. Prospective members, however, may submit papers to be read at this meeting.

Concerning the Annual Meeting, which has been tentatively scheduled to be held in New York City on June 20th and 21st, we are particularly anxious to know whether this date is essentially acceptable to the majority of the membership. We should also like to take this opportunity to notify all members and prospective members that titles and abstracts of papers for consideration for this meeting must be sent in to the Editor of the Rorschach Research Exchange before April 1st so that the final program may appear in the April issue of the Exchange.

Following is the official list of the members and fellows of the Rorschach Institute as of January, 1941:

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THE N. Y. DIVISION OF THE RORSCHACH INSTITUTE ANNOUNCES:

The next regular meeting of the N. Y. Division will be held at the N.Y. State Psychiatric Institute and Hospital, 722 W. 168 Street, N.Y.C. on Monday, February 24th, at 8 p.m.

At that time William Goldfarb, Ph.D. will present a paper entitled "Rorschach Reactions of a Group of Enuretic Children Below the age of 10 Years."

All members of the Rorschach Institute are cordially invited to be present.

THE PENNSYLVANIA DIVISION OF THE RORSCHACH INSTITUTE

announces the following course

for the Spring term, 1941

Advanced Seminar on the Rorschach Method. . . . . .Dr. Bruno Klopfer

Six sessions on the following Wednesdays:

February 5, February 19
March 5, March 19
April 2, April 16

6:30 - 9:00 P.M. - Room 401, Conwell Hall, Temple University
Fee $15.00

The course will consist mainly in case presentations which will cover as many types of subjects and fields of application as feasible. Members of the seminar will be permitted to submit cases which will be included in the program in so far as possible. Cases so submitted should be completely scored and tabulated.

Admission limited to professionally trained persons in psychology, psychiatry, sociology and social work who have had courses AB (The intensive introductory course including seminar, lectures and study groups) or the equivalent of membership requirements in the Rorschach Institute.

Registration should be completed by January 15, 1941